AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-233

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-233.01
AMSAT Symposium Banquet Speaker Announced

AMSAT News Service Bulletin 233.01
  From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.01

The Symposium committee is pleased to announce that Lance Ginner, K6GSJ has agreed to be our banquet speaker. 2011 is the 50th anniversary of the first amateur satellite in space (OSCAR 1) and Lance was part of the team that developed that satellite.

We are also pleased to announce that Alan Bowker, WA6DNR has volunteered to take over the reins for the 2011 AMSAT Symposium in San Jose, CA. Alan was kind enough to step in for Herb Sullivan, K6QXB who had to resign this week for personal reasons.

The Symposium and Annual Meeting will be held Nov 4-6 at the Wyndham San Jose Hotel adjacent to the San Jose airport. See the AMSAT Web site for details, reservation form and additional information.

[ANS thanks Gould, WA4SXM, for the above information]

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SB SAT @ AMSAT $ANS-233.02
AMSAT Fox to Become Fox-1 and Fox-2

AMSAT News Service Bulletin 233.02
  From AMSAT HQ SILVER SPRING, MD.

August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.02

The AMSAT Fox CubeSat project is being split into a complementary pair of new CubeSats named Fox-1 and Fox-2.

Fox-1 will address the need to quickly develop and launch a replacement for the ailing AO-51. Fox-1 will include an FM transponder paired with a simple IHU for telemetry and control and fitted to a basic CubeSat space frame. This small and highly focused set of capabilities will significantly reduce the time needed for satellite development and construction allowing for a launch target in the second half of 2013.

The advanced technology, research and development work, started for the original Fox satellite, will be continued and rolled into Fox-2 including the software defined transponder. With Fox-1 addressing the immediate need for an AO-51 replacement, Fox-2 will instead be designed for a linear transponder mission. A linear transponder requires considerably more power so Fox-2 will also include an advanced power system and a cutting-edge space frame with deployable solar panels. Fox-2 will have a launch target in the 2015 time frame.

There are still opportunities for developers interested in working on these satellites especially in the areas of project management, systems engineering, thermal and mechanical design, CNC machining, circuit design, software development, system test and test equipment development.

If interested, please send email to Tony Monteiro, AA2TX@amsat.org

[ANS thanks AMSAT Vice-President of Engineering, Tony Monteiro, AA2TX for the above information]

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SB SAT @ AMSAT $ANS-233.03
Worked 5 in EM55 Award List Continues to Grow

AMSAT News Service Bulletin 233.03
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.03

In an effort to help increase interest in satellites, hams in the Memphis, Tennessee area have created a new award for working five (5) different hams via satellite in the EM55 grid.

You do not have to be in your home grid to count the stations worked. There are several satellite ready hams in EM55. Here is the current list of EM55 based satellite operators that we know of: WA4NVM, WA4HFN, WB4LHD, WA4OVO, KI4OTG, KD4NOQ, KJ4BIX, AJ4KF, N4MGT and W5KUB.

Send your log to WA4NVM or WA4HFN for checking, along with your current mailing address. The award is free and should any donations be sent, they will be forwarded to AMSAT along with your call and name.

This award will be effective 1 June 2011, therefore, all contacts

must be on or after this date.

Here is list of the Worked 5 in EM55 awards:

WA4NVM - 1	KB0RZD - 6	KB1RVT - 11	KM9U - 16	NX9B - 21
WA4HFN - 2	W5KUB - 7	AC0RA - 12	K4FEG - 17	KC0YBM - 22
KI4OTG - 3	AJ5C - 8	K4YYL - 13	K7TRK - 18	N8MS - 23
K8YSE - 4	CO6CBF - 9	KB1PVH - 14	KF7MYK - 19	W5PFG - 24
N9AMW - 5	WC7V - 10	N8RO - 15	KI6YAA - 20	

[ANS thanks Rick, WA4NVM for the above information]

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SB SAT @ AMSAT $ANS-233.04
FO-29 Reaches 15th Birthday

AMSAT News Service Bulletin 233.04
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.04

Japan's FO-29 satellite passed its 15th birthday on August 17th.
Thanks to the careful power system management by the operating
team the analog repeater continues to function well.

Recent telemetry received from FO-29 shows:
Operational continuous analog bus voltage: 15 ~ 16.5V
Solar generation current: 1050 ~ 1450mA
Battery Voltage: 16.0 ~ 17.5V
Charging current: 70m ~ 110mA
Transmit Power: 500 ~ 900mW
Assemblies Temperature: 0 ~ 11.5 °
Battery Temperature: 10.5 ~ 11.5 °

The linear transponder can be accessed on these frequencies:

Uplink: 146.000 - 145.900 MHz
Downlink: 435.800 - 435.900 MHz
Beacon: 435.795 MHz

The FO-29 Blog is on-line at:
http://blog.goo.ne.jp/fo-29
A google english translation of the blog can be found at:
http://tinyurl.com/FO29Blog

[ANS thanks T.Oguro, JG1KOE on behalf of the FO-29 Control Team
for the above information]

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SB SAT @ AMSAT $ANS-233.05
BPSK-1000 Test Files and Downlink SDR Passband Recording Available

AMSAT News Service Bulletin 233.05
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.05

Even if your station does not have a 2 meter SSB receiver capable

of copying the BPSK-1000 telemetry downlinked on 145.920 MHz there are recorded files allowing you to experiment with the ARISSatTLM software and Software Defined Radio (SDR) techniques in an off-line mode.

Download and install ARISSatTLM software from:
http://www.arissattlm.org
The ARISSatTLM Software Quick Start Guide remains available from the link on the AMSAT front page: http://www.amsat.org. This guide describes software installation, real-time signal reception, and playback of recorded BPSK-1000 telemetry files.

AMSAT-DK has made several recordings of the BPSK-1000 beacon with their OZ7SAT station. Start at:
http://www.amsat.dk/oz7sat/sched.php?gs=1kte&sat=ISSAT-1&statusAll
Then select a particular pass and download the recording. The files are about 65 MB each. Their system starts recording about 90 seconds before AOS and continues to a bit after LOS as calculated for their location in Copenhagen. These recordings can be played back using the ARISSatTLM software (Start Sound Card, Open WAV File).

Additionally, the Morse Code Decoder window in the ARISSatTLM software also works on HF. Tune in a CW signal using the Tuning Indicator window. The decoded CW will stream across the Morse Code Decoder Window.

Recording of Full ARISSat-1/KEDR Downlink Passband Available

Mark, N8MH recorded several passes of ARISSat-1 using the Funcube Dongle (FCD) Software Defined Receiver and the HDSDR program. The resulting file from a 10 min pass, recording the whole FCD passband, is about 250MB. Mark posted a file on the AMSAT FTP server at:
http://tinyurl.com/3d87h8l

This file can be played back using the HDSDR software which you can download from: http://www.hdsdr.de/ Mark's recording was made with NO correction for Doppler. About a minute into the recording (click to fast forward, back up, etc. you'll see signals--CW telemetry, the BPSK telemetry, the linear transponder, and the FM voice channel. Move around, change modes, listen, etc. You can back up to a previous spot on the recorded signal at will, just with a click.

Mark noted additional experimental and classroom opportunities, "If the bug really bites you, you can install Virtual Audio Cable (VAC) and have HDSDR use it as the output, and then configure a decoding program (like ARISSatTLM or MMSSTV) to decode telemetry and/or SSTV pics using VAC as the input. It's neat. You can print SSTV without tuning for Doppler on playback. Tuning for the BPSK telemetry will require adjustment for doppler shift."

Steve Belter, N9IP has put together an excellent tutorial on setting and using HDSDR especially with the FCD. Find it in the Yahoo group:
http://uk.groups.yahoo.com/group/funcube/files/User%20Guides/
You can read the on-line discussions using the FUNcube Dongle SDR by joining their yahoo group at:
http://uk.groups.yahoo.com/group/funcube/

Howard, G6LVB, creator of the FUNcube Dongle SDR wrote this week that he has released a new firmware version to correct a bug in the USB streaming code which produced clicking every few seconds for some users. The firmware image is here:
http://www.funcubedongle.com/MyImages/export18i.pro.bin

[ANS thanks the ARISSat-1/KEDR Team for the above information]

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SB SAT @ AMSAT $ANS-233.06
NASA Announces Next Opportunity for CubeSat Space Missions

AMSAT News Service Bulletin 233.06
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.06

NASA is seeking proposals for small satellite payloads to fly on rockets planned to launch between 2012 and 2014. These miniature spacecraft, known as CubeSats, could be auxiliary payload on previously planned missions.

CubeSats are a class of research spacecraft called nanosatellites. The cube-shaped satellites are approximately four inches long, have a volume of about one quart and weigh less than three pounds.

Proposed CubeSat investigations must be consistent with NASA's Strategic Plan and the Education Strategic Coordination Framework. The research should address aspects of science, exploration, technology development, education or operations.

Applicants must submit proposals electronically by 4:30 p.m. EST on Nov. 14, 2011. NASA will select the payloads by Jan. 30, 2012. Selection does not guarantee a launch opportunity. The selected spacecraft will be eligible for flight after final negotiations when a launch opportunity arises. NASA will not provide funding for the development of the small satellites.

NASA recently announced the results from the second round of the CubeSat Launch Initiative. From the first two launch initiatives, 32 payloads made the short-list for launch opportunities in 2011 and 2012. They are eligible for launch pending an appropriate opportunity and final negotiations. The satellites come from 18 states: Alabama, Alaska, California, Colorado, Hawaii, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Missouri, Montana, New Hampshire, New Mexico, New York, Pennsylvania, Utah and Virginia.

For additional information about NASA's CubeSat Launch Initiative program, visit:
http://go.nasa.gov/puk9K2
http://go.nasa.gov/CubeSatOp

[ANS thanks NASA Education Express - Aug. 11, 2011 for the above information]

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SB SAT @ AMSAT $ANS-233.07
Time Running Out On The DARA Matching Gift Challenge

AMSAT News Service Bulletin 233.07
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.07

Donate to AMSAT and DARA will contribute matching funds. The Dayton

Amateur Radio Association (DARA) fund raising challenge for AMSAT continues until September 1, 2011. DARA will match $1.00 for every $3.00 donated up to $5,000.00.

AMSAT kicked off the fundraising campaign at the Hamvention, where donations began count for the challenge. Please consider making a donation to AMSAT and have your effort multiplied. We appreciate DARA's support for AMSAT!

Your donation will support our "Getting AMSAT Back Into Space" campaign by providing needed funds for AMSAT Project Fox Cubesat which will provide a 2M to 70cm FM transponder matching the performance of AO-51.

+ On-line at the AMSAT Store:
  http://www.amsat-na.com/store/donation.php

+ You may click on the donation widget on our http://www.amsat.org
  web page.

+ You may call Martha at the AMSAT Office:
  From the US call toll free at: (888) 322-6728
  From all other locations call: (301) 589-6062
  and you can send a fax to: (301) 608-3410

+ You can send donations by postal mail to:
  AMSAT-NA
  850 Sligo Ave #600
  Silver Spring, MD, 20910

[ANS thanks AMSAT Headquarters for the above information]

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SB SAT @ AMSAT $ANS-233.08
Satellite Shorts From All Over

AMSAT News Service Bulletin 233.08
From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.08

+ James French, W8ISS, Editor of the Weekly Satellite Report apologizes for problems with his e-mail over the past few weeks which may have prevented a few WSR bulletins from being transmitted by the list. James reports being able to e-mail the bulletin but problems with his ISP have appeared to prevent delivery to the remailer. This week's WSR-231 appears to have been successfully distributed.

+ AMSAT received the sad news that Mark Austin, KB1GVR, became a silent key on August 8. Graveside services were held on August 18 in Ellsworth, Maine. Mark's obituary can be read on-line at: http://tinyurl.com/3bcrkg4 (BangorDailyNews.com)

+ Dove OSCAR 17 video - January 22, 1990, saw the launch of the DOVE Amateur Radio satellite sponsored by AMSAT-Brazil and lead by Dr. Junior Torres DeCastro, PY2BJO. DOVE, an acronym for Digital Orbiting Voice Encoder, carried hardware capable of reproducing digitized speech, or controlling a Votrax speech synthesizer and transmitted AX.25 packet on 145.825 MHz. Watch the video, showing historic still pictures of DOVE: http://tinyurl.com/3o87x4f (Southgate ARC)

+ P-POD grows up: A 6U Canisterized Satellite Dispenser was displayed
   at the recent Small Satellites conference that will allow larger
   CubeSats to be deployed. Traditionally much smaller P-POD's (Poly
   Picosatellite Orbital Deployer) have been used to deploy CubeSats.
   The 6U CSD standard allows CubeSats up to 12 x 24 x 36 cm weighing
   12Kg to be deployed and is shown in a video:
   http://tinyurl.com/3hjmrmf (Southgate ARC)

+ UniverseToday posted STS-135 Redux: Launch Tribute Video at:

http://www.universetoday.com/88183/sts-135-redux-launch-tribute-video/

+ AMSAT's Keeper of the Keps, Ray Hoad, WA5QGD reported this week that
   ARISSat-1 has been added to the KEP distribution. The Catalog # is
   37772.

+ Christian Diemoz, IX1CKN/HB9EYT/KC2YXI, has published a history of
   SAREX experiments and operations on the DXCoffee.com website:
   http://www.dxcoffee.com/eng/2011/08/10/radio-space-beginning-sarex/

+ Video of the Atlas-V launch of the Juno mission to Jupiter has been
   posted at:
   http://www.universetoday.com/88018/rockin-with-the-juno-launch/

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-233.09
ARISS Status - 15 August 2011

AMSAT News Service Bulletin 233.09
  From AMSAT HQ SILVER SPRING, MD.
August 21, 2011
To All RADIO AMATEURS
BID: $ANS-233.09

1. Caribbean Youth Radio ISS

On Monday, August 8, children attending the Caribbean Youth Science
Forum (CYSF), a regional event sponsored by the National Institute
for Higher Education, Research, Science & Technology (NIHERST) and
located in Port-of-Spain, Trinidad, West Indies, participated in an
Amateur Radio on the International Space Station (ARISS) contact.
Telebridge station LU8YY in Argentina provided the radio connection.
The youth interacted with Astronaut Satoshi Furukawa, KE5DAW on the
ISS, receiving answers to ten of their questions about space. The
contact was integrated into the CYSF which included lectures, field
trips, projects and debates that promoted science, technology and
innovation. The forum hosted 250 students this year from 6 countries.
Newsday reported on the contact:
http://www.newsday.co.tt/news/0,145262.html

2. Italian Camp Contacts ISS

A successful Amateur Radio on the International Space Station (ARISS)
contact was held between on-orbit astronaut Ron Garan, KF5GPO and the
Youth Hostel "La Foresta" in Perugia, Italy on Thursday, August 11 via
station K6DUE in Greenbelt, Maryland. Garan fielded 18 questions posed
to him by the children. The camp, organized by Panda Adventure in coop-
eration with ESA /ESRIN, focuses on space education and provides acti-

vities such as field researches, experiments, use of technical instru-
ments, and games to explore the Earth and Sky.

3. ARISS-U.S. Reviews Proposals

The NASA Teaching From Space Office received over 100 inquiries about
the U.S. proposal process for ARISS contacts that will be scheduled dur-
ing the January - July 2012 time frame. Twenty-four schools met the
July 15 deadline and submitted proposals. The U.S. Selection Committee
is currently reviewing the proposals and will select U.S. schools by the

end of the month. Another window of opportunity for U.S. schools and
organizations to submit proposals will open later in the year.

4. EE Times - ARISSat Blog

The fourth and fifth entries in EE (Electronic Engineering) Times "Chips

in Space" blog covering amateur radio satellite ARISSat-1 have been
post-
ed. See:
http://eetimes.com/electronics-blogs/chips-in-space/4218536/Chips-in-Spac
e--
SuitSat-2-becomes-ARISSat-1--When-we-lost-our-suit---not-really-

http://eetimes.com/electronics-blogs/other/4218756/Chips-in-Space--Let-s-
loo
k-
inside-ARISSat-1--part-1-

5. DXCoffee Article on Ham Radio in Space

The Italian site DXCoffee.com printed a story about the history of
amateur radio in space. The article covers amateur radio used by Owen
Garriott, the Mir station, SAREX and ARISS and includes recent contacts
with Doug Wheelock and Paolo Nespoli. "Radio in space: in the Beginning
there was SAREX," may be viewed here:
http://www.dxcoffee.com/eng/2011/08/10/radio-space-beginning-sarex/

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's
Club. Members of the President's Club, as sustaining donors to AMSAT
Project
Funds, will be eligible to receive additional benefits. Application
forms
are
available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS